

We claim:

1. A system to facilitate session initiation protocol (SIP) proxy-based support of routing as regards communications for at least a given region, comprising:

at least one SIP proxy dedicated, at least in part, to supporting routing of communications for a plurality of clients in the given region, wherein at least some of the plurality of clients each have a plurality of differing user identifiers and wherein, for at least one of the plurality of clients, at least two of the plurality of differing user identifiers each corresponds to a same first communication service;

at least one memory operably coupled to the at least one SIP proxy.

2. The system of claim 1 wherein the at least one SIP proxy comprises at least two SIP proxies.

3. The system of claim 1 wherein the at least two of the plurality of differing user identifiers that each corresponds to a same communication service further comprises at least two of the plurality of differing user identifiers that each corresponds to a push-to-talk communication service.

4. The system of claim 1 wherein one of the plurality of differing user identifiers comprises an identifier having a standard SIP uniform resource identifier format and wherein another of the plurality of differing user identifier comprises an identifier having a standard telecommunications uniform resource identifier format.

5. The system of claim 1 wherein the at least one SIP proxy operably couples to a push-to-talk server.

6. The system of claim 1 and further comprising at least one additional SIP proxy dedicated, at least in part, to supporting routing of communications for a second plurality of clients in a second region, wherein at least some of the second plurality of clients each have a plurality of differing user identifiers and wherein, for at least one of the second plurality of clients, at least two of the plurality of differing user identifiers each corresponds to the first communication service.

7. The system of claim 6 wherein the at least one SIP proxy as is dedicated to the region is operably coupled to the at least one additional SIP proxy as is dedicated to the second region.

8. The system of claim 6 wherein a wireless coverage area as corresponds to the region at least partially overlaps with a wireless coverage area as corresponds to the second region.

9. The system of claim 6 wherein a wireless coverage area as corresponds to the region does not overlap with any part of a wireless coverage area as corresponds to the second region.

10. The system of claim 6 and further comprising at least one further additional SIP proxy dedicated, at least in part, to supporting to supporting routing of communications for a third plurality of clients in a third region, wherein at least some of the third plurality of clients each have a plurality of differing user identifiers and wherein, for at least one of the third plurality of clients, at least two of the plurality of differing user identifiers each corresponds to a same communication service.

11. The system of claim 1 wherein the at least one SIP proxy supports SIP compression.

12. The system of claim 11 wherein the at least one SIP proxy supports SIP compression to thereby improve airlink utilization as between a given one of the push-to-talk clients and the at least one SIP proxy.

13. The system of claim 12 wherein the at least one SIP proxy comprises a first hop SIP proxy with respect to the given one of the push-to-talk clients.

14. The system of claim 1 wherein the at least one SIP proxy supports push-to-talk styled communications for roaming push-to-talk clients in the given region.

15. The system of claim 1 wherein the at least one SIP proxy supports inter-region push-to-talk styled communications as between push-to-talk clients that are located in different regions.

16. The system of claim 1 wherein the at least one SIP proxy further supports presence service.

17. The system of claim 16 wherein the at least one SIP proxy further supports presence service for at least some of the plurality of push-to-talk clients within the given region.

18. The system of claim 1 wherein the given region comprises a plurality of push-to-talk service domains each having a corresponding uniform resource identifier domain name.

19. The system of claim 1 wherein the given region comprises a push-to-talk service domain of a push-to-talk service having a plurality of push-to-talk service domains each having a corresponding uniform resource identifier domain name.

20. The system of claim 1 wherein the user identifiers for the plurality of clients have at least one of a domain name and a sub-domain name that is distinct from any domain name and sub-domain name, respectively, as is assigned to any network component in the system.

21. The system of claim 1 wherein the at least one SIP proxy further comprises authentication and registration means for facilitating authentication of push-to-talk clients.

22. The system of claim 21 wherein the authentication and registration means are further for serving as a registrar for mobile clients.

23. The system of claim 21 wherein the authentication and registration means are further for accommodating a push-to-talk client that presents either of at least two different available-to-the-client client uniform resource identifiers.

24. The system of claim 1 wherein the at least one SIP proxy further comprises routing means for making routing decisions for SIP messages as are provided thereto.

25. The system of claim 24 wherein the routing means are further for facilitating routing decisions in conjunction with a directory server.

26. The system of claim 24 wherein the routing means are further for making the routing decisions for all SIP messages as are provided thereto.

27. The system of claim 1 wherein the at least one SIP proxy further comprises compression means for compressing and decompressing SIP traffic to and from a corresponding one of the push-to-talk clients.

28. The system of claim 1 wherein the at least one SIP proxy further comprises presence means for supporting presence within the system, at least in part, by supporting SIP/SIMPLE messages.

29. A method to facilitate session initiation protocol (SIP) proxy-based support of routing as regards communications for at least a given region, comprising:

providing at least one SIP proxy dedicated, at least in part, to supporting routing of communications for a plurality of clients in the given region, wherein at least one of the plurality of clients has at least two differing uniform resource identifiers by which to identify itself;

when receiving a communication from the at least one of the plurality of clients that uses a first one of the at least two differing uniform resource identifiers, automatically facilitating a first kind of communication for that client;

when receiving a communication from the at least one of the plurality of clients that uses a second one of the at least two differing uniform resource identifiers, which second one of the at least two differing uniform resource identifiers is different from the first one of the at least two differing uniform resource identifiers, automatically facilitating the first kind of communication for that client.

30. The method of claim 29 wherein the first one of the at least two differing uniform resource identifiers comprises an SIP uniform resource identifier.

31. The method of claim 29 wherein the second one of the at least two differing uniform resource identifiers comprises a telecommunications uniform resource identifier.

32. The method of claim 29 and further comprising:
providing the at least one SIP proxy with a system name having a domain name portion that is different than any domain name as is assigned to any of the plurality of clients.

33. The method of claim 29 wherein the at least one SIP proxy comprises a plurality of SIP proxies and wherein the given region comprises a plurality of push-to-talk domains and further comprising:
assigning at least some of the plurality of SIP proxies to different ones of the push-to-talk domains.

34. The method of claim 29 wherein automatically facilitating a first kind of communication for that client further comprises automatically facilitating a push-to-talk communication for that client.

35. The method of claim 34 wherein automatically facilitating a push-to-talk communication for that client further comprises automatically facilitating a wireless push-to-talk communication for that client.

36. The method of claim 34 wherein automatically facilitating a push-to-talk communication for that client further comprises automatically facilitating a wireline push-to-talk communication for that client.

37. The method of claim 29 and further comprising:
upon receiving a communication from a first one of the plurality of clients, automatically authenticating the first one of the plurality of clients via the at least one SIP proxy.

38. The method of claim 37 and further comprising:
automatically authenticating the first one of the plurality of clients via the at least one SIP proxy using an authentication server.

39. The method of claim 29 and further comprising:
upon receiving an SIP communication from a first one of the plurality of clients, automatically decompressing the SIP communication.

40. The method of claim 29 and further comprising:
automatically compressing an SIP communication to provide a compressed SIP communication intended for receipt by at least one of the plurality of clients.

41. The method of claim 40 wherein automatically compressing an SIP communication to provide a compressed SIP communication intended for receipt by at least one of the plurality of clients further comprises automatically compressing an SIP communication to provide a compressed SIP communication intended for wireless receipt by at least one of the plurality of clients.

42. The method of claim 29 and further comprising:
upon receiving an SIP communication from a first one of the plurality of clients, automatically publishing presence information regarding the first one of the plurality of clients.

43. A session initiation protocol (SIP) proxy comprising:
an SIP proxy engine;
a memory operably coupled to the proxy engine;
a push-to-talk server interface to facilitate operably coupling the SIP proxy engine to a push-to-talk server;
wherein the SIP proxy engine has at least a first mode of operation wherein the SIP proxy engine will facilitate a push-to-talk communication for a push-to-talk client that communicates an SIP message to the SIP proxy containing either of two different client identifiers as are available to that push-to-talk client.

44. The SIP proxy of claim 43 wherein the first mode of operation further facilitates decompression of compressed SIP messages as are received from the push-to-talk client.

45. The SIP proxy of claim 43 wherein the first mode of operation further facilitates compression of SIP messages as are transmitted to the push-to-talk client.

46. The SIP proxy of claim 43 wherein the first mode of operation further facilitates authentication and registration of the push-to-talk client.

47. The SIP proxy of claim 43 wherein the first mode of operation further facilitates making routing decisions for SIP messages as are sourced by the push-to-talk client.

48. The SIP proxy of claim 43 wherein the first mode of operation further facilitates supporting distribution of presence information regarding the push-to-talk client.

49. The SIP proxy of claim 43 wherein the first mode of operation further facilitates a roaming communication for the push-to-talk client.

50. A method comprising:
receiving a message comprising a uniform resource identifier;
when the uniform resource identifier comprises a telecommunications uniform resource identifier, recognizing the uniform resource identifier as being a telecommunications uniform resource identifier and processing the message accordingly;
when the uniform resource identifier has a host portion that is the same as a serving host portion, recognizing that the host portion is the same as a serving host portion and processing the message accordingly;
when the uniform resource identifier matches an entry in a registration list, recognizing that the uniform resource identifier matches the entry in the registration list and processing the message accordingly.

51. The method of claim 50 wherein receiving a message comprising a uniform resource identifier comprises receiving a message as part of a communications exchange to facilitate provision of push-to-talk communication services.

52. The method of claim 50 wherein recognizing the uniform resource identifier as being a telecommunications uniform resource identifier and processing the message accordingly further comprises processing the message by:

when the telecommunications uniform resource identifier matches an entry for a registered device in a registration list, facilitating transmission of a message to the registered device.

53. The method of claim 50 wherein recognizing the uniform resource identifier as being a telecommunications uniform resource identifier and processing the message accordingly further comprises processing the message by:

sourcing a transmission to determine whether a proxy exists having a pre-established relationship with respect to the telecommunications uniform resource identifier;

when a response to the transmission identifies such a proxy, facilitating transmission of at least a portion of the message to the proxy.

54. The method of claim 53 wherein recognizing the uniform resource identifier as being a telecommunications uniform resource identifier and processing the message accordingly further comprises processing the message by:

when the response to the transmission indicates that the telecommunications uniform resource identifier does not correspond to a registered device, facilitating transmission of a predetermined response.

55. The method of claim 54 wherein the predetermined response comprises a Session Initiation Protocol 480 response.

56. The method of claim 50 wherein recognizing the uniform resource identifier as being a telecommunications uniform resource identifier and processing the message accordingly further comprises processing the message by:

when the response to the transmission indicates that the telecommunications uniform resource identifier does not correspond to a known uniform resource identifier, facilitating transmission of a predetermined communication.

57. The method of claim 56 wherein the predetermined communication comprises a request for directory routing information.

58. The method of claim 57 wherein recognizing the uniform resource identifier as being a telecommunications uniform resource identifier and processing the message accordingly further comprises processing the message by:

receiving a response to the request for directory routing information;

when the response to the request for directory routing information comprises an address, using the address to facilitate transmission of at least a portion of the message.

59. The method of claim 50 wherein recognizing that the host portion is the same as a serving host portion and processing the message accordingly further comprises processing the message by:

determining whether the uniform resource identifier has a corresponding unexpired cached route.

60. The method of claim 59 wherein recognizing that the host portion is the same as a serving host portion and processing the message accordingly further comprises processing the message by:

the uniform resource identifier has a corresponding unexpired cached route, facilitating transmission of a least a portion of the message to a proxy associated with the unexpired cached route.

61. The method of claim 59 wherein recognizing that the host portion is the same as a serving host portion and processing the message accordingly further comprises processing the message by:

facilitating transmission of a predetermined communication comprising a request for directory routing information.

62. The method of claim 61 wherein recognizing that the host portion is the same as a serving host portion and processing the message accordingly further comprises processing the message by:

receiving a response to the request for directory routing information;

when the response to the request for directory routing information comprises an address, using the address to facilitate transmission of at least a portion of the message.

63. The method of claim 50 wherein recognizing that the uniform resource identifier matches the entry in the registration list and processing the message accordingly further comprises processing the message by:

sourcing a transmission to determine whether a proxy exists having a pre-established relationship with respect to the uniform resource identifier;

when a response to the transmission identifies such a proxy, facilitating transmission of at least a portion of the message to the proxy.

64. The method of claim 63 wherein recognizing that the uniform resource identifier matches the entry in the registration list and processing the message accordingly further comprises processing the message by:

when the response to the transmission indicates that the uniform resource identifier does not correspond to a registered device, facilitating transmission of a predetermined response.

65. The method of claim 64 wherein the predetermined response comprises a Session Initiation Protocol 480 response.